

PERSONAL INFORMATION

Name: Maria Pisani

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Date of birth: 19/07/1968

Nationality: Italian

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PROFESSIONAL PROFILE

Software analyst-programmer with over 26 years of experience in developing customized software solutions, with a strong passion for applying new technologies, particularly Neural Networks and Large Language Models (LLM) applied to clinical research. Expert in developing Artificial Intelligence models for extracting and formatting clinical data, with a focus on process optimization and improving data quality in the healthcare sector. Advanced skills in using AI tools for creating automated charts, presentations, and summaries from clinical data.

EDUCATION AND TRAINING

- Degree in Information Science - University of Pisa, February 26, 1999
- Scientific High School Diploma

WORK EXPERIENCE

CNR/TUSCANY REGION FOUNDATION "GABRIELE MONASTERIO" at "G. Pasquinucci" Heart Hospital

Software analyst-programmer

From 4/2024 to present

Freelance professional assignment in the role of Software analyst-programmer supporting activities related to the European research project KINAITICS - Grant Agreement 101070176, Objective Code 2023001. Activities carried out in WP6.

From 10/2022 to 04/2024

Freelance professional assignment in the role of Software analyst-programmer supporting activities related to the research project Covid Tuscany 19 - RE-START TUSCANY - CUP CODE 155F21000880002.

Main activities:

- Participation in the European KINAITICS project (Cyber-kinetics attacks using Artificial Intelligence) focusing on IT security in healthcare and implementation of advanced solutions for sensitive data protection.
- Participation in the EHDEN project (European Health Data and Evidence Network) for the harmonization and standardization of health data at European level.
- Design and implementation of advanced deep learning models for analyzing complex clinical data (texts and diagnostic images).
- Development of customized AI Foundation Models for specific applications in clinical research and diagnostics.
- Implementation of GDPR protocols in data extraction and processing procedures for artificial intelligence systems.
- Optimization of anonymization and pseudonymization techniques to ensure regulatory compliance in health data management.
- Automated extraction of medical information from clinical documents using LLM and conversion to FHIR format for healthcare systems interoperability.
- Design and development of analytical dashboards and interactive visualizations for effective interpretation of clinical data using AI tools.

Sanguinetti Group srl - Via Passo Volpe 11/A 54033 - Avenza (MS)

Software analyst-programmer level 1

Commercial sector contract:

- Full time (from 27/09/1999 to February 2004)
- Part time 75% (from March 2004 to June 2022)
- Part time 50% (from July 2022 to present)

Main activities:

- Technical and functional analysis and design of software solutions in the field of digital printing.
- Design and querying of C-Tree, MySQL, Postgres databases.
- Creation of digital documents (AFP, PDF and Postscript formats) using document composition software.
- Creation of ad hoc software for data management and formatting.
- Creation of software for managing the handling of print flows via ftp sites or e-mail.
- Creation of software for starting printing and/or retransmission of finished products to the customer, through fully automated processes.
- Creation of software aimed at automating the processes necessary for the creation, printing, and enveloping of various types of digital documents.

SKILLS

Programming Languages:

- Python
 - AI/ML Libraries: TensorFlow, PyTorch, Scikit-learn, Keras, Hugging Face Transformers
 - Data Science: NumPy, Pandas, Matplotlib, Seaborn
 - NLP: NLTK, SpaCy, Gensim
 - Tools: Jupyter Notebook, Google Colab, Anaconda
- C
- PHP
- C#
- Vbasic

Databases:

- MySQL
- Postgres
- C-Tree

AI/ML:

- Large Language Models (LLM)
- Deep Learning
- Natural Language Processing (NLP)
- AI Foundation Models
- Medical information extraction
- Automatic generation of charts and presentations with AI
- Automatic summaries of clinical documents

Other:

- Document Composition (DOC1 - Océ PRISMA tools)
- Office Suite
- Graphics software (FreeHand, Paint Shop Pro)
- Privacy by design principles and GDPR
- Anonymization and pseudonymization techniques
- Clinical data DB management
- FHIR (Knowledge and application of standards)
- Conversion of clinical data to FHIR format

FOREIGN LANGUAGES

English: Good (Excellent knowledge for AI domain)

PERSONAL SKILLS AND COMPETENCIES

- Excellent ability to learn new programming languages
- Excellent ability to learn how to use new software
- Excellent ability to relate with clients and work in teams